

Fig. 1 shows Raman spectra from two different regions. The relative intensity scales have been normalized to the same value for the highest peak in each spectra.

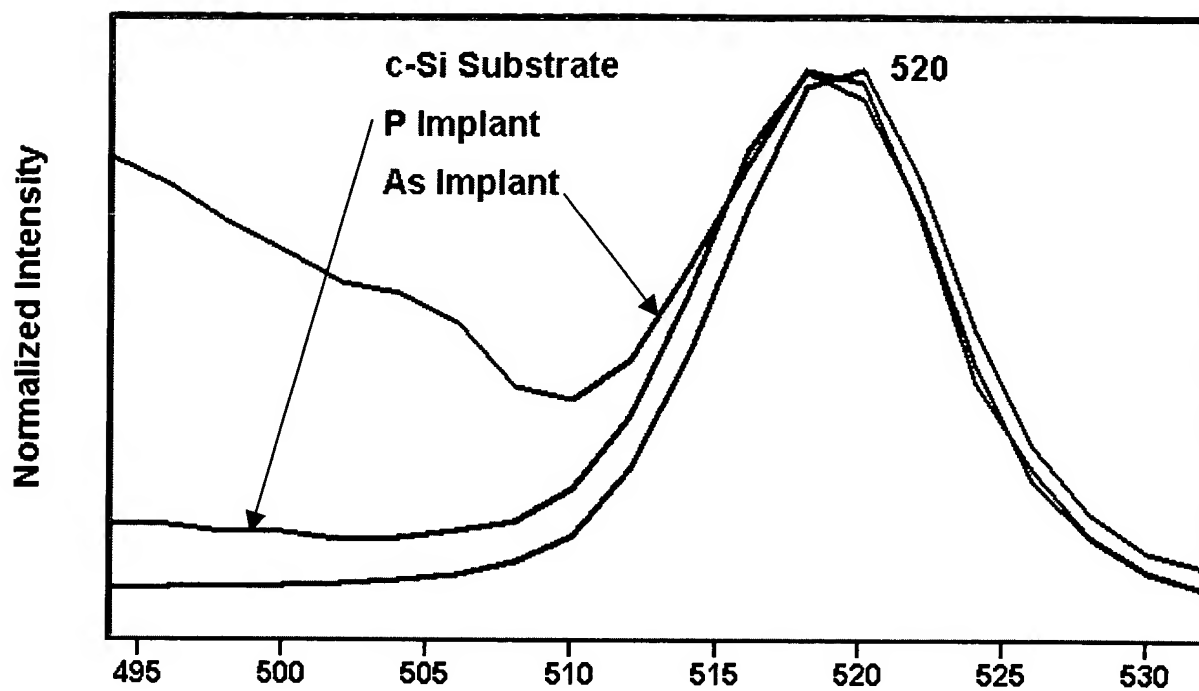


Fig. 2 shows Raman spectra from 490 to 530 cm^{-1} which are all normalized to the peak at 520 cm^{-1} .

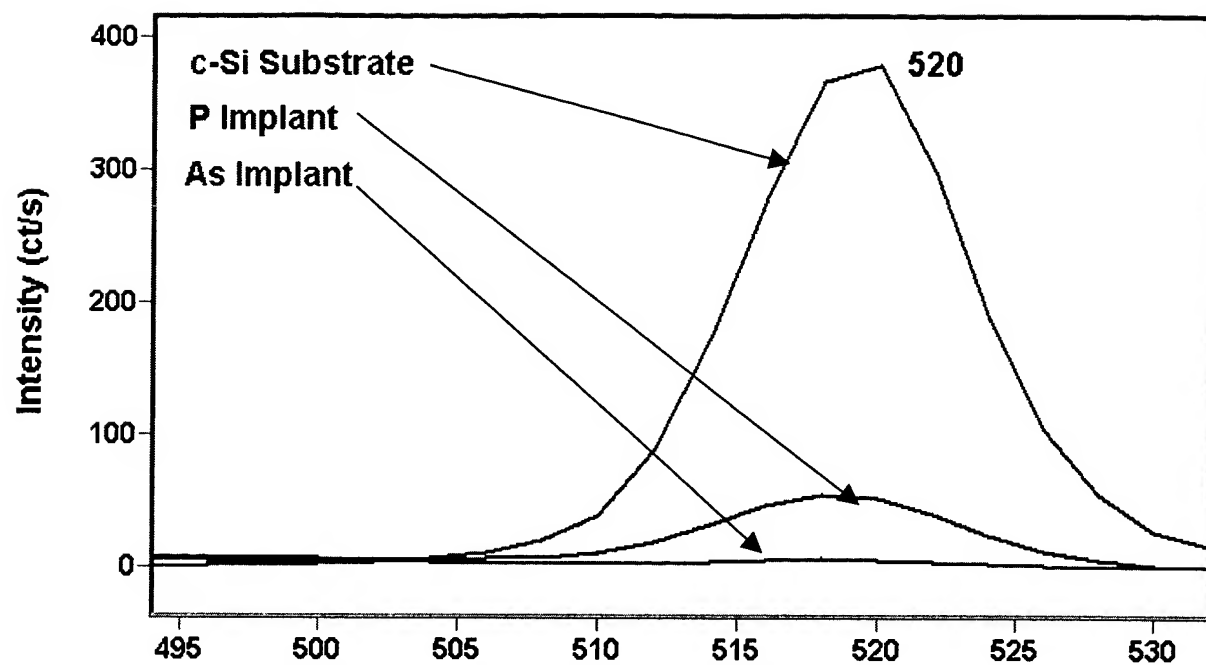
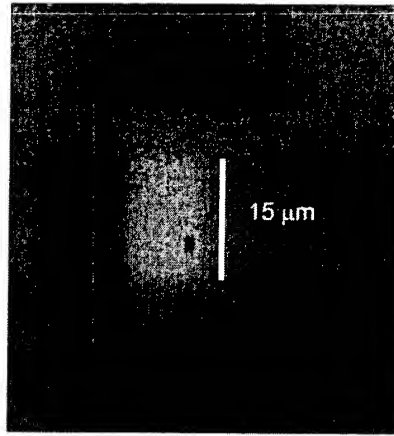
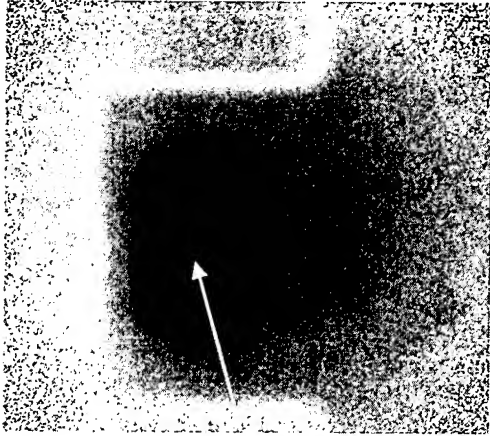


Fig. 3 shows Raman spectra of Fig. 2 plotted on the same scale.

Raman Image of Ion Implanted Si

Raman Scattered Light at 520 cm^{-1}

Reflected White Light



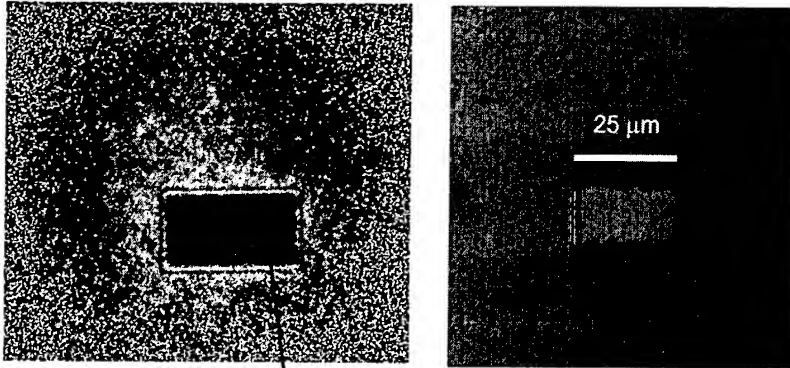
Implant: $2.7 \times 10^{12}\text{ P cm}^{-2}$

Fig. 4 shows images of a portion of a silicon wafer with a $15\text{ }\mu\text{m}$ high rectangular feature which has been implanted with $2.7 \times 10^{12}\text{ cm}^{-2}$ phosphorus. The Raman image on the left uses the intensity of the 520 cm^{-1} Raman feature where white corresponds to the highest crystalline peak intensity and black to the absence of crystalline silicon.

Raman Image of Ion Implanted Si

Raman Scattered Light at 520 cm^{-1}

Reflected White Light



Implant: $1.2 \times 10^{12}\text{ B cm}^{-2}$

Fig. 5 shows images of a portion of a silicon wafer where the rectangular region 25 μm wide is implanted with $1.2 \times 10^{12}\text{ cm}^{-2}$ boron.

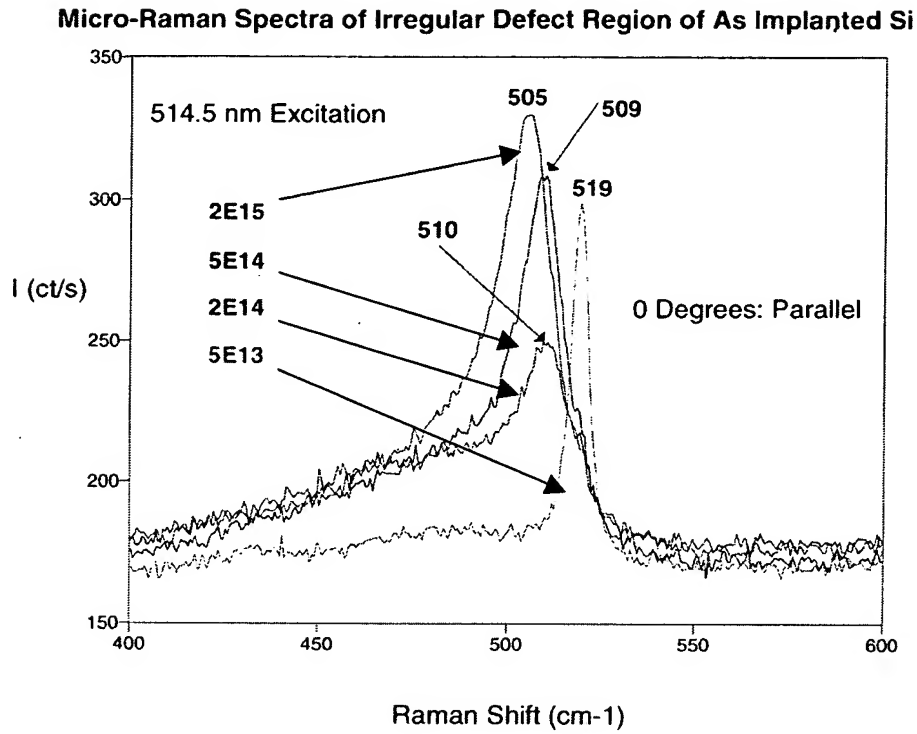


Fig. 6 shows Raman spectra of inclusions in silicon implanted with arsenic ions.

Micro-Raman Spectra of Irradiated Defect Region of As Implanted Si

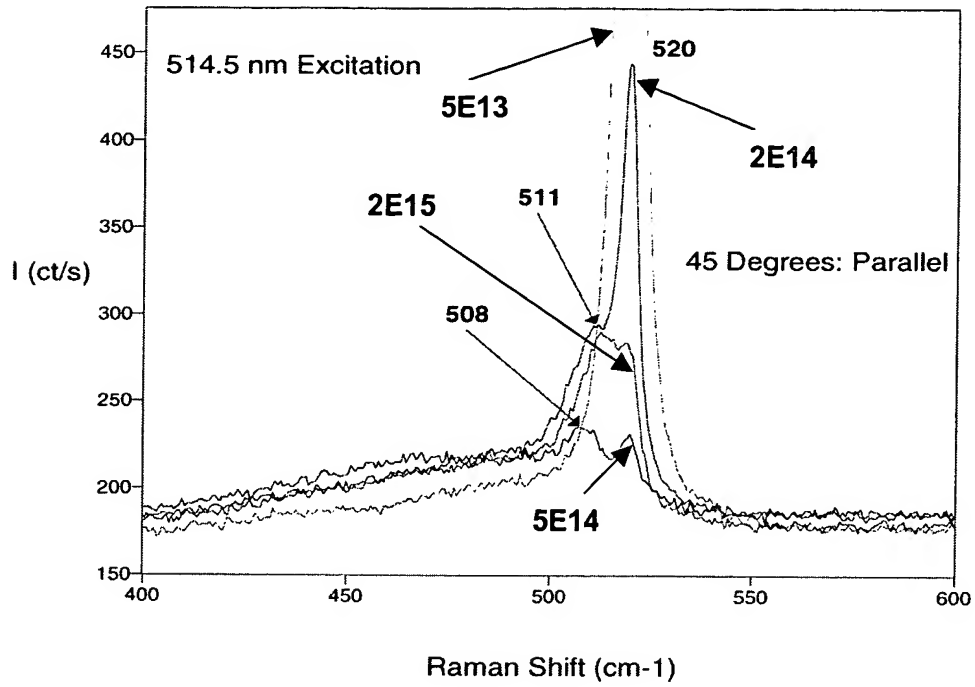


Fig. 7 shows Raman spectra of inclusions in silicon implanted with arsenic ions.

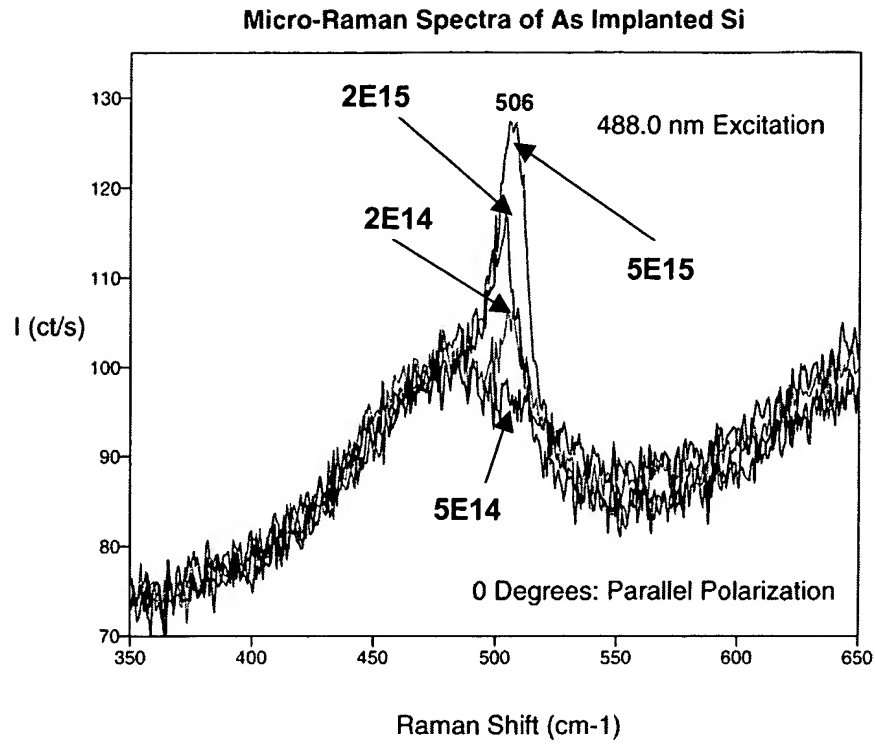


Fig. 8 shows Raman spectra of inclusions in silicon implanted with arsenic ions.

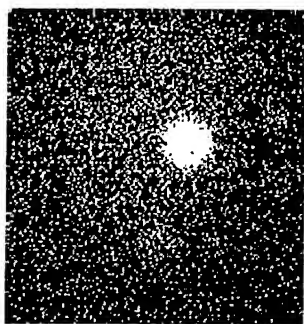


Fig. 9 shows a Raman image of a hexagonal phase inclusion in silicon.